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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,493	02/10/2004	Hans-Stephan Albrecht	LMPY-20410	1454
28584	7590	12/22/2005	EXAMINER	
STALLMAN & POLLOCK LLP 353 SACRAMENTO STREET SUITE 2200 SAN FRANCISCO, CA 94111			GOLUB, MARCIA A	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

K.A

<b>Office Action Summary</b>	<b>Application No.</b> 10/775,493	<b>Applicant(s)</b> ALBRECHT ET AL.	
	<b>Examiner</b> Marcia A. Golub	<b>Art Unit</b> 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-24 is/are rejected.
- 7) ☐ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/26/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-11, 13-24** are rejected under 35 U.S.C. 102(b) as being anticipated by Algots et al. (6,192,064).

Regarding **claim 1** Fig 9 of Algots discloses “a gas discharge laser system, comprising: a resonator [defined by OC 4 and LNP 7A] including therein a discharge chamber [3] filled with a gas mixture, the discharge chamber containing a plurality of electrodes [connectors for HV] connected to a discharge circuit [HV, 24a] for energizing the gas mixture and generating an optical pulse in the discharge chamber, the resonator further including at least one window [window for output beam 6] at an end of the discharge chamber for sealing the discharge chamber and for transmitting the optical pulse as an optical beam;

and an optics module [LNP 7A] positioned in a path of the optical pulse in the resonator, the optics module including therein a wavelength tuning element [any of 8,10,12,14c,16] and a tuning motor coupled to the wavelength tuning element [any of 32,14b,15, 34,30], the tuning motor capable of adjusting the wavelength tuning element in order to tune the wavelength of the optical beam transmitted from the resonator.”

(7/26-29)

Regarding **claim 15** Fig 9 of Algots discloses "a optics module [LNP] for a gas discharge laser [3], the optics module comprising: an optical module housing [7a] including at least one window [window between the laser and the LNP] for receiving and transmitting an optical beam;

a wavelength tuning element [any of 8,10,12,14c,16] in the optical module housing positioned in a beam path of the optical beam;

a bearing assembly [any of prism plate, mirror plate, grating bender] mounted inside the optical module housing and coupled to the wavelength tuning element [prism, mirror, grating], the bearing assembly allowing for a movement of the wavelength tuning element;

and a tuning motor [any of 32,14b,15, 34,30] mounted inside the optical module housing and coupled to the wavelength tuning element [any of 8,10,12,14c,16], the tuning motor capable of moving the wavelength tuning element in order to tune the wavelength of the optical beam transmitted from the optical module housing.

Regarding **claims 2-11,13,14,16-20** Fig 9 of Algots discloses a gas discharge laser system as described above, in addition:

**Claims 2 and 16:** "a control module [24a] operable to provide a drive signal to the tuning motor [any of 32, 34,30] in order to adjust the orientation of the wavelength tuning element;

**Claims 3 and 17:** wherein the wavelength tuning element is a prism [8,10,12]

**Claim 4:** a bearing assembly (shown in Fig 6a, 6b, 6c, 6d) for mounting the wavelength tuning element [14], the bearing assembly allowing for a rotation [tilting] of the tuning element upon operation of the tuning motor [15, 34]; (4/38-52)

**Claims 5 and 19:** a lever coupled between the wavelength tuning element [14] and the tuning motor [15,34], such that motion of the tuning motor moves the tuning element to tune the wavelength of the optical beam; (Fig 6A, 6C) (4/38-52)

**Claim 6:** a coupling mechanism [ball and spring] coupling the lever to the tuning motor [34]; (Fig 6A)

**Claim 7:** wherein: the coupling mechanism includes a ball held in position by one of a magnet and a spring [spring]; (Fig 6A)

**Claims 8 and 20:** wherein the tuning motor adjusts the wavelength tuning element in order to achieve a wavelength stability of less than 0.03 pm [less than 0.1 nm] (7/26-29)

**Claim 9:** a beam splitter [positioned near 4 and 22] positioned in a path of the optical beam [6] in order to redirect a portion of the optical beam.

**Claim 10:** a diagnostic module [22] receiving the redirected portion of the optical beam, the diagnostic module adapted to determine a wavelength of the optical beam and generate a wavelength signal in response thereto;

and a control module [24a] adapted to receive the wavelength signal and drive the tuning motor to adjust the orientation of the wavelength tuning element in response to the wavelength signal; (1/63-2/9)

**Claim 11:** at least one additional tuning motor [any of 14b,14d,15] coupled to the wavelength tuning element and adapted to adjust the orientation of the wavelength tuning element [14c];

**Claim 13:** wherein: the tuning motor [34] is flexibly coupled to the wavelength tuning element [14] through a moveable gib connected to the tuning motor; (Fig 6a)

**Claims 14 and 18:** wherein: the tuning motor is selected from the group consisting of piezo ceramic motors, linear drive motors, piezo drive motors, linear voice coil actuator drive units, and rotary voice coil actuator drive units. [stepper motor 15, piezo electric motor14b] (7/11,13)

Regarding **claims 21-24**, the apparatus set forth above with regards to claim 1-11,13-20, discloses the functions and limitations of the method claims 21-24.

***Allowable Subject Matter***

**Claim 12** is objected to as being dependent upon a rejected base claim 1, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an assembly for tuning the wavelength of a gas laser wherein: the tuning motor is one of a plurality of tuning flexibly coupled to the wavelength tuning element; the plurality of tuning motors being in a radial configuration about a drive cylinder, the drive cylinder being coupled to the wavelength tuning element. The described assembly in combination with the rest of the limitations of the claim is novel.

**Contact Info**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcia A. Golub whose telephone number is 571-272-8602. The examiner can normally be reached on M-F 9-6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Minsun Harvey  
SPE  
Art Unit 2828

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